

**Title:**

fluorescence spectroscopic studies of the interaction between nanoemulsion including drug with human Hemoglobin

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**Abstract:**

(Hb) is one of important and effective of blood proteins. In the present study, the intraction of a new synthesized nanoemulesion (as a new drug carrier) with human Hb, as a amodel protein, was investigiated by different spectroscopic method of fluorescence at different temperatures of 25, 37, 42 and 47 0C. Intrinsic fluorescence studies show that nanoemulesion have ability to quenching of fluorescence intensity Hb via static quenching mechanism. Also, in the presence of different concentrations of nanoemulesion, the maximum emission wavelength of Hb was shifted to a smaller wavelength (blue shift), which indicates that the hyrophobicity of Trp environment was decreased by. adding nanoemulesion Also, the binding site of nanoemulesion may be in the near of tryptophan residue. From above results, it can be concluded that our new designed nanoemulsion can change the secondary and tertiary structure of Hb at different temperatures.

**Keywords:** Hemoglobin, nanoemulsion, fluorescence

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